



## SEQUENCE LISTING

<10> Salmedix, Inc.  
Leoni, Lorenzo M.

<120> COMPOSITIONS AND METHODS FOR THE DETECTION AND TREATMENT OF METHYLTHIOADENOSINE PHOSPHORYLASE DEFICIENT CANCERS

<130> 076936-0307942

<140> 10/779,476

<141> 2004-02-13

<150> 60/447,888

<151> 2003-02-14

<150> 60/460,715

<151> 2004-04-04

<160> 12

<170> PatentIn version 3.2

<210> 1

<211> 283

<212> PRT

<213> Homo sapiens

<400> 1

Met Ala Ser Gly Thr Thr Thr Thr Ala Val Lys Ile Gly Ile Ile Gly  
1 5 10 15

Gly Thr Gly Leu Asp Asp Pro Glu Ile Leu Glu Gly Arg Thr Glu Lys  
20 25 30

Tyr Val Asp Thr Pro Phe Gly Lys Pro Ser Asp Ala Leu Ile Leu Gly  
35 40 45

Lys Ile Lys Asn Val Asp Cys Ile Leu Leu Ala Arg His Gly Arg Gln  
50 55 60

His Thr Ile Met Pro Ser Lys Val Asn Tyr Gln Ala Asn Ile Trp Ala  
65 70 75 80

Leu Lys Glu Glu Gly Cys Thr His Val Ile Val Thr Thr Ala Cys Gly  
85 90 95

Ser Leu Arg Glu Glu Ile Gln Pro Gly Asp Ile Val Ile Ile Asp Gln  
100 105 110

Phe Ile Asp Arg Thr Thr Met Arg Pro Gln Ser Phe Tyr Asp Gly Ser  
 115 120 125

His Ser Cys Ala Arg Gly Val Cys His Ile Pro Met Ala Glu Pro Phe  
 130 135 140

Cys Pro Lys Thr Arg Glu Val Leu Ile Glu Thr Ala Lys Lys Leu Gly  
 145 150 155 160

Leu Arg Cys His Ser Lys Gly Thr Met Val Thr Ile Glu Gly Pro Arg  
 165 170 175

Phe Ser Ser Arg Ala Glu Ser Phe Met Phe Arg Thr Trp Gly Ala Asp  
 180 185 190

Val Ile Asn Met Thr Thr Val Pro Glu Val Val Leu Ala Lys Glu Ala  
 195 200 205

Gly Ile Cys Tyr Ala Ser Ile Ala Met Ala Thr Asp Tyr Asp Cys Trp  
 210 215 220

Lys Glu His Glu Glu Ala Val Ser Val Asp Arg Val Leu Lys Thr Leu  
 225 230 235 240

Lys Glu Asn Ala Asn Lys Ala Lys Ser Leu Leu Leu Thr Thr Ile Pro  
 245 250 255

Gln Ile Gly Ser Thr Glu Trp Ser Glu Thr Leu His Asn Leu Lys Asn  
 260 265 270

Met Ala Gln Phe Ser Val Leu Leu Pro Arg His  
 275 280

<210> 2  
 <211> 2269  
 <212> DNA  
 <213> Homo sapiens

<400> 2  
 gaattccgct ccgcactgct cactcccgcg cagtgcggtt ggcacagcca ccgctctgtg 60  
 gctcgcttgg ttcccttagt cccgagcgct cgcccactgc agattccttt cccgtgcaga 120  
 catggcctct ggcaccacca ccaccgccgt gaagattgga ataattggtg gaacaggcct 180

ggatgatcca gaaatthttag aaggaagaac tgaaaaatat gtggatactc catttggcaa	240
gccatctgat gccttaattt tggggaagat aaaaaatgtt gattgcatcc tccttgcaag	300
gcatggaagg cagcacacca tcatgccttc aaaggtcaac taccaggcga acatctgggc	360
tttgaaggaa gagggctgta cacatgtcat agtgaccaca gcttgtggct ccttgagggg	420
ggagattcag cccggcgata ttgtcattat tgatcagttc attgacagga ccactatgag	480
acctcagtc tctatgatg gaagtcattc ttgtgccaga ggagtgtgcc atattccaat	540
ggctgagccg ttttgcccca aaacgagaga ggttcttata gagactgcta agaagctagg	600
actccggtgc cactcaaagg ggacaatggc cacaatcgag ggacctcgtt ttagctcccg	660
ggcagaaagc ttcattgttc gcacctgggg ggcggatgtt atcaacatga ccacagttcc	720
agaggtggtt cttgctaagg aggctggaat ttgttacgca agtatcgcca tggcgacaga	780
ttatgactgc tggaaggagc acgaggaagc agtttcgggtg gaccgggtct taaagacct	840
gaaagaaaac gctaataaag ccaaaagctt actgctcact accatactc agataggggc	900
cacagaatgg tcagaaaccc tccataacct gaagaatatg gccagtttt ctgttttatt	960
accaagacat taaagtagca tggctgcccc ggagaaaaga agacattcta attccagtca	1020
ttttgggaat tcctgcttaa cttgaaaaaa atatgggaaa gacatgcagc tttcatgccc	1080
ttgcctatca aagagtatgt tgtaagaaag acaagacatt gtgtgtatta gagactcctg	1140
aatgatttag acaacttcaa aatacagaag aaaagcaaat gactagtaaa catgtgggaa	1200
aaaatattac attttaaggg ggaaaaaaaa aacccaccca ttctcttctc cccctattaa	1260
atttgcaaca ataaaggggtg gagggtaatc tctactttcc tatactgcca aagaatgtga	1320
ggaagaaatg ggactctttg gttattttatt gatgcgactg taaattggta cagtatttct	1380
ggagggcaat ttggtaaaat gcatcaaaag acttaaaaat acggacgtcc tttggtgctg	1440
ggaactctac atctagcaat ttctctttta aaccatatca gagatgcata caaagaatta	1500
tatataaaga aggggtgttta ataattgatg ttataataat aaataattga aacaatctga	1560
atcccttgca attggaggta aattatgtct tagttataat ctagattgtg aatcagccaa	1620
ctgaaaatcc tttttgcata tttcaatgtc ctaaaaagac acggttgtct tatatatgaa	1680
gtgaaaaaag gatattggtag catttttatag tactagtttt gctttaaaat gctatgtaaa	1740
tatacaaaaa aactagaaag aaatatatat aaccttggtt ttgtatttgg gggagggata	1800
ctgggataat ttttattttc tttgaatctt tctgtgtctt cacatttttc tacagtgaat	1860
ataatcaaat agtaaagggc cgtaaaaata aaagtggatt tagaaagatc cagttcttga	1920

aaacactgtt tctggtaatg aagcagaatt taagttggta atattaaggt gaatgtcatt 1980  
 taagggagtt acatctttat tctgctaaag aagaggatca ttgatttctg tacagtcaga 2040  
 acagtacttg ggtgtgcaac agctttctga gaaaagctag gtgtataata gtttaactga 2100  
 aagtttaact atttaaaaga ctaaatgcac attttatggg atctgatatt ttaaaaagta 2160  
 atgtgagctt ctccttttta tgagttaa atttttatac gagttggtaa tttgtgcctt 2220  
 ttaataaagt ggaagcttgc tttttaaaaa aaaaaaaaaa gcggaattc 2269

<210> 3  
 <211> 156  
 <212> PRT  
 <213> Homo sapiens

<400> 3

Met Glu Pro Ala Ala Gly Ser Ser Met Glu Pro Ser Ala Asp Trp Leu  
 1 5 10 15

Ala Thr Ala Ala Ala Arg Gly Arg Val Glu Glu Val Arg Ala Leu Leu  
 20 25 30

Glu Ala Gly Ala Leu Pro Asn Ala Pro Asn Ser Tyr Gly Arg Arg Pro  
 35 40 45

Ile Gln Val Met Met Met Gly Ser Ala Arg Val Ala Glu Leu Leu Leu  
 50 55 60

Leu His Gly Ala Glu Pro Asn Cys Ala Asp Pro Ala Thr Leu Thr Arg  
 65 70 75 80

Pro Val His Asp Ala Ala Arg Glu Gly Phe Leu Asp Thr Leu Val Val  
 85 90 95

Leu His Arg Ala Gly Ala Arg Leu Asp Val Arg Asp Ala Trp Gly Arg  
 100 105 110

Leu Pro Val Asp Leu Ala Glu Glu Leu Gly His Arg Asp Val Ala Arg  
 115 120 125

Tyr Leu Arg Ala Ala Ala Gly Gly Thr Arg Gly Ser Asn His Ala Arg  
 130 135 140

Ile Asp Ala Ala Glu Gly Pro Ser Asp Ile Pro Asp  
 145 150 155

<210> 4  
 <211> 1218  
 <212> DNA  
 <213> Homo sapiens

<400> 4  
 cccaacctgg ggcgacttca ggtgtgccac attcgctaag tgctcggagt taatagcacc 60  
 tcctccgagc actcgctcac ggcgtccctt tgcttgaaa gataccgcgg tccctccaga 120  
 ggatttgagg gacaggggtcg gagggggctc ttccgccagc accggaggaa gaaagaggag 180  
 gggctggctg gtcaccagag ggtggggcgg accgcgtgcg ctggcgggct gcggagaggg 240  
 ggagagcagg cagcgggcgg cggggagcag catggagccg gcggcgggga gcagcatgga 300  
 gccttcggct gactggctgg ccacggccgc ggcccggggt cgggtagagg aggtgcgggc 360  
 gctgctggag gcgggggcgc tgcccaacgc accgaatagt tacggtcgga ggccgatcca 420  
 ggtcatgatg atgggcagcg cccgagtggc ggagctgctg ctgctccacg gcgcggagcc 480  
 caactgcgcc gaccccgcca ctctacccg acccgtgcac gacgctgccc gggagggctt 540  
 cctggacacg ctggtggtgc tgcaccgggc cggggcgcgg ctggacgtgc gcgatgcctg 600  
 gggcgcgtctg cccgtggacc tggctgagga gctgggcat cgcatgtcg cacggtacct 660  
 gcgcgcggct gcggggggca ccagaggcag taaccatgcc cgcatagatg ccgcggaagg 720  
 tccctcagac atccccgatt gaaagaacca gagaggctct gagaaacctc gggaaactta 780  
 gatcatcagt caccgaaggt cctacagggc cacaactgcc cccgccacaa cccaccccg 840  
 tttcgtagtt ttcatctaga aaatagagct tttaaaaatg tcctgccttt taacgtagat 900  
 atatgccttc cccactacc gtaaagtgtc atttatatca ttttttatat attcttataa 960  
 aaatgtaaaa aagaaaaaca ccgcttctgc cttttcactg tggttgagtt ttctggagt 1020  
 agcactcacg ccctaagcgc acattcatgt gggcatttct tgcgagcctc gcagcctccg 1080  
 gaagctgtcg acttcatgac aagcattttg tgaactaggg aagctcaggg gggttactgg 1140  
 cttctcttga gtcacactgc tagcaaattg cagaaccaa gctcaaataa aaataaaata 1200  
 attttcattc attcactc 1218

<210> 5  
 <211> 173  
 <212> PRT  
 <213> Homo sapiens

<400> 5

Met Gly Arg Gly Arg Cys Val Gly Pro Ser Leu Gln Leu Arg Gly Gln  
 1 5 10 15

Glu Trp Arg Cys Ser Pro Leu Val Pro Lys Gly Gly Ala Ala Ala  
 20 25 30

Glu Leu Gly Pro Gly Gly Gly Glu Asn Met Val Arg Arg Phe Leu Val  
 35 40 45

Thr Leu Arg Ile Arg Arg Ala Cys Gly Pro Pro Arg Val Arg Val Phe  
 50 55 60

Val Val His Ile Pro Arg Leu Thr Gly Glu Trp Ala Ala Pro Gly Ala  
 65 70 75 80

Pro Ala Ala Val Ala Leu Val Leu Met Leu Leu Arg Ser Gln Arg Leu  
 85 90 95

Gly Gln Gln Pro Leu Pro Arg Arg Pro Gly His Asp Asp Gly Gln Arg  
 100 105 110

Pro Ser Gly Gly Ala Ala Ala Ala Pro Arg Arg Gly Ala Gln Leu Arg  
 115 120 125

Arg Pro Arg His Ser His Pro Thr Arg Ala Arg Arg Cys Pro Gly Gly  
 130 135 140

Leu Pro Gly His Ala Gly Gly Ala Ala Pro Gly Arg Gly Ala Ala Gly  
 145 150 155 160

Arg Ala Arg Cys Leu Gly Pro Ser Ala Arg Gly Pro Gly  
 165 170

<210> 6  
 <211> 1275  
 <212> DNA  
 <213> Homo sapien

<400> 6  
 cctccctacg ggcgcctccg gcagcccttc ccgcgtgcgc agggctcaga gccgttccga 60  
 gatcttggag gtccgggtgg gagtgggggt ggggtggggg tgggggtgaa ggtggggggc 120  
 gggcgcgctc aggggaaggcg ggtgcgcgcc tgcggggcgg agatgggcag ggggcggtgc 180  
 gtgggtccca gtctgcagtt aagggggcag gagtggcgct gctcacctct ggtgccaaag 240  
 ggcggcgag cggtctccga gctcggccct ggaggcggcg agaacatggt gcgcaggttc 300  
 ttggtgacct tccgattcg gcgcgcgtgc ggcgcgcgc gagtgagggt ttctgtggtt 360  
 cacatccgc ggctcacggg ggagtgggca gcgccagggg cgcgcgcgc tgtggccctc 420  
 gtgctgatgc tactgaggag ccagcgtcta gggcagcagc cgcttcctag aagaccaggt 480  
 catgatgatg ggcagcgccc gagtggcgga gctgctgctg ctccacggcg cggagcccaa 540  
 ctgcgcgac cccgccactc tcacccgacc cgtgcacgac gctgcccggg agggcttctt 600  
 ggacacgctg gtggtgctgc accgggcccgg ggcgcggctg gacgtgcgcg atgcctgggg 660  
 ccgtctgccc gtggacctgg ctgaggagct gggccatcgc gatgtcgac ggtacctgcg 720  
 cgcggctgcg gggggcacca gaggcagtaa ccatgcccgc atagatgccg cggaaggctc 780  
 ctgagacatc cccgattgaa agaaccagag aggctctgag aaacctcggg aaacttagat 840  
 catcagtcac cgaaggctct acagggccac aactgcccc gccacaacc acccgcttt 900  
 cgtagttttc atttagaaaa tagagctttt aaaaatgtcc tgccttttaa cgtagatata 960  
 tgccttcccc cactaccgta aatgtccatt tatatcattt tttatatatt cttataaaaa 1020  
 tgtaaaaaag aaaaacaccg cttctgcctt ttcactgtgt tggagttttc tggagtgagc 1080  
 actcacgcc taagcgcaca ttcattgtgg catttcttgc gagcctcgca gcctccggaa 1140  
 gctgtcgact tcatgacaag cattttgtga actaggaag ctcagggggg ttactggctt 1200  
 ctcttgagtc aactgctag caaatggcag aaccaaagct caaataaaaa taaaataatt 1260  
 ttcattcatt cactc 1275

<210> 7  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 7

Met Met Met Gly Ser Ala Arg Val Ala Glu Leu Leu Leu Leu His Gly  
 1 5 10 15

Ala Glu Pro Asn Cys Ala Asp Pro Ala Thr Leu Thr Arg Pro Val His  
 20 25 30

Asp Ala Ala Arg Glu Gly Phe Leu Asp Thr Leu Val Val Leu His Arg  
 35 40 45

Ala Gly Ala Arg Leu Asp Val Arg Asp Ala Trp Gly Arg Leu Pro Val  
 50 55 60

Asp Leu Ala Glu Glu Leu Gly His Arg Asp Val Ala Arg Tyr Leu Arg  
 65 70 75 80

Ala Ala Ala Gly Gly Thr Arg Gly Ser Asn His Ala Arg Ile Asp Ala  
 85 90 95

Ala Glu Gly Pro Ser Asp Ile Pro Asp  
 100 105

<210> 8  
 <211> 897  
 <212> DNA  
 <213> Homo sapiens

<400> 8

tgtgtggggg tctgcttggc ggtgaggggg ctctacacaa gcttcctttc cgtcatgccg	60
gccccacccc tggctctgac cattctgttc tctctggcag gtcattgatga tgggcagcgc	120
ccgagtggcg gagctgctgc tgctccacgg cgcggagccc aactgcgcgcg accccgccac	180
tctcacccga cccgtgcacg acgctgcccg ggagggcttc ctggacacgc tgggtggtgct	240
gcaccggggc ggggcgcggc tggacgtgcg cgatgcctgg ggccgtctgc ccgtggacct	300
ggctgaggag ctgggccatc gcatgtcgc acggtacctg cgcgcggctg cggggggcac	360
cagaggcagt aaccatgccc gcatagatgc cgcggaaggt cctcagaca tccccgattg	420
aaagaaccag agaggctctg agaaacctcg ggaaacttag atcatcagtc accgaaggtc	480



ctacagggcc acaactgccc ccgccacaac ccaccccgct ttcgtagttt tcatttagaa 540  
aatagagctt ttaaaaatgt cctgcctttt aacgtagata taagccttcc cccactaccg 600  
taaattgtcca tttatatcat tttttatata ttcttataaa aatgtaaaaa agaaaaacac 660  
cgcttctgcc ttttactgt gttggagttt tctggagtga gcaactcacgc cctaagcgca 720  
cattcatgtg ggcatttctt gcgagcctcg cagcctccgg aagctgtcga cttcatgaca 780  
agcattttgt gaactagga agctcagggg gggtactggc ttctcttgag tcacactgct 840  
agcaaattggc agaaccaaag ctcaaataaa aataaaataa ttttcattca ttcactc 897

<210> 9  
<211> 116  
<212> PRT  
<213> Homo sapiens

<400> 9

Met Glu Pro Ala Ala Gly Ser Ser Met Glu Pro Ser Ala Asp Trp Leu  
1 5 10 15

Ala Thr Ala Ala Ala Arg Gly Arg Val Glu Glu Val Arg Ala Leu Leu  
20 25 30

Glu Ala Gly Ala Leu Pro Asn Ala Pro Asn Ser Tyr Gly Arg Arg Pro  
35 40 45

Ile Gln Val Gly Arg Arg Ser Ala Ala Gly Ala Gly Asp Gly Gly Arg  
50 55 60

Leu Trp Arg Thr Lys Phe Ala Gly Glu Leu Glu Ser Gly Ser Ala Ser  
65 70 75 80

Ile Leu Arg Lys Lys Gly Arg Leu Pro Gly Glu Phe Ser Glu Gly Val  
85 90 95

Cys Asn His Arg Pro Pro Pro Gly Asp Ala Leu Gly Ala Trp Glu Thr  
100 105 110

Lys Glu Glu Glu  
115

<210> 10  
 <211> 1515  
 <212> DNA  
 <213> Homo sapiens

<400> 10  
 cccaacctgg ggcgacttca ggtgtgccac attcgctaag tgctcggagt taatagcacc 60  
 tcctccgagc actcgctcac ggcgtcccct tgcctggaaa gataccgcgg tccctccaga 120  
 ggatttgagg gacagggctc gagggggctc ttccgccagc accggaggaa gaaagaggag 180  
 gggctggctg gtcaccagag ggtggggcgg accgcgtgcg ctggggcggc gcggagaggg 240  
 ggagagcagg cagcgggcgg cggggagcag catggagccg gcggcgggga gcagcatgga 300  
 gccggcggcg gggagcagca tggagccttc ggctgactgg ctggccacgg ccgcggcccc 360  
 gggtcgggta gaggaggtgc gggcgctgct ggaggcgggg gcgctgcca acgcaccgaa 420  
 tagttacggc cggaggccga tccaggtggg tagaaggtct gcagcgggag caggggatgg 480  
 cgggcgactc tggaggacga agtttgcagg ggaattggaa tcaggtagcg cttcgattct 540  
 ccggaaaaag gggaggcttc ctggggagtt ttcagaaggg gtttgtaatc acagacctcc 600  
 tcctggcgac gccctggggg cttgggaaac caaggaagag gaatgaggag ccacgcgcgt 660  
 acagatctct cgaatgctga gaagatctga aggggggaac atatttgtat tagatggaag 720  
 tcatgatgat gggcagcgcc cgagtggcgg agctgctgct gctccacggc gcggagccca 780  
 actgcgccga ccccgccact ctccccgac ccgtgcacga cgctgcccgg gagggcttcc 840  
 tggacacgct ggtggtgctg caccgggccc gggcgcggtt ggacgtgcgc gatgcctggg 900  
 gccgtctgcc cgtggacctg gctgaggagc tgggccatcg cgatgtcgca cggtaacctg 960  
 gcgcggctgc ggggggcacc agaggcagta accatgcccg catagatgcc gcggaaggct 1020  
 cctcagacat ccccgattga aagaaccaga gaggtcttga gaaacctcgg gaacttagat 1080  
 catcagtcac cgaaggtcct acagggccac aactgcccc gccacaacc accccgcttt 1140  
 cgtagttttc atttagaaaa tagagctttt aaaaatgtcc tgccttttaa cgtagatata 1200  
 tgccttcccc cactaccgta aatgtccatt tatatcattt tttatatatt cttataaaaa 1260  
 tgtaaaaaag aaaaacaccg cttctgcctt ttcactgtgt tggagttttc tggagtgagc 1320  
 actcacgcc taagcgcaca ttcattgtgg catttcttgc gagcctcgca gcctccggaa 1380  
 gctgtcgact tcatgacaag ctttttgtga actaggaag ctcagggggg ttactggctt 1440  
 ctcttgagtc aactgctag caaatggcag aaccaagct caaataaaaa taaaataatt 1500

ttcattcatt cactc

1515

<210> 11

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer for  
cloning MTAP cDNA

<400> 11

ctcgccact gcagattcct ttcccgt

27

<210> 12

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Antisense primer for  
cloning MTAP cDNA

<400> 12

ggcagccatg ctactttaat gtcttgg

27